Impact Analysis of Interventions by Fourth Year Student Pharmacists in Affiliated Practice Sites During Advanced Pharmacy Practice Experiences

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Background
- Prior research has demonstrated that student pharmacists positively impact their practice sites clinically and financially.1,2,3
- It is important to document interventions to demonstrate this impact and ensure that students remain involved in direct patient care.
- These interventions may assist the health system in avoiding unnecessary costs and promote best practices in patient care.
- In this school of pharmacy, fourth year student pharmacists are required to document clinical interventions during advanced pharmacy practice experiences.
- Interventions are documented in a single, commercially available, web-based, password protected system, Pharmacy OneSource/Quantifi®.
- This system captures both hard and soft cost savings for documented interventions.

Objective
To conduct an impact analysis of fourth year student pharmacists’ clinical interventions during advanced pharmacy practice experiences in a single school of pharmacy to determine the financial and clinical impact on patient care at training sites.

Methods
- Approximately 150 student pharmacists are responsible for documenting their interventions each year.
- Reports of student-documented clinical interventions from 2011-2014 were collected from Quantifi® and the data was analyzed quantitatively and qualitatively.
- Using Microsoft Excel, the data was sorted based on:
  - Year
  - Type of intervention (e.g. ADR prevented or Vaccine Administered)
  - Number of interventions
  - Estimated cost savings associated with the intervention

Results
Figure 1: Total number of interventions documented each year compared to the cost savings in dollars
The number of interventions documented remained fairly consistent across the years analyzed. The count ranged from 40,623 in 2011 to 48,256 in 2012. The number of interventions decreased slightly in 2013 and 2014. However, the estimated cost savings associated with these interventions increased drastically—from $1,815,651 in 2011 to $4,004,764 in 2014. Types of intervention remained fairly consistent across all four years with “Inpatient Encounter” being the most commonly documented intervention each year at a rate of 21-24%. Notably, the intervention “Patient Counseling” increased from 6% in previous years to 13% in 2014.

Table 1: Common Intervention Definitions

<table>
<thead>
<tr>
<th>Intervention</th>
<th>Description</th>
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<tr>
<td>Inpatient Encounter</td>
<td>Assessment of a patient’s medical chart and/or rounding on the patient</td>
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<tr>
<td>Patient Counseling</td>
<td>Brief session to educate a patient or caregiver on the patient’s medication regimen, disease states, and/or non-pharmacologic therapy</td>
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<tr>
<td>Outpatient Review</td>
<td>Review of a patient’s chart when rounding in the clinic, answering questions, discussing care with preceptor and/or other health care providers, clarifying medications, returning phone calls to patients, etc.</td>
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<tr>
<td>Drug Information</td>
<td>Information provided to medical professionals</td>
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<tr>
<td>Outpatient Reassessment</td>
<td>Outpatient follow-up pharmacy visit; used as the primary intervention to document the reassessment and/or intervention for a scheduled visit with a pharmacist</td>
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Conclusions
Each year, student-documented interventions resulted in higher cost savings to the health care system. These cost savings are illustrated in the estimates of over one million dollars saved each year and demonstrate the positive impact student pharmacists in this school of pharmacy have had on their practice sites during advanced pharmacy practice experiences.

References

Disclosures: Authors of this presentation have nothing to disclose concerning possible financial or personal relationships with commercial entities that may have a direct or indirect interest in the subject matter of this presentation.